

THE POSITIVE AND NEGATIVE EXPERIENCE SCALE ADAPTATION FOR TURKISH UNIVERSITY STUDENTS¹

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Abstract

The purpose of this study is to examine the psychometric properties of the Scale of Positive and Negative Experience, which was developed to measure the positive and negative affects, in the Turkish culture. Study group of the research consists of 401 university students, 280 (70%) of which were female and 121 (30%) were male. Results of the exploratory factor analysis support the two-factor structure as in the original scale. Results of the confirmatory factor analysis show that fit indexes are at acceptable levels. As a result of the convergent validity study, significant relationships were discovered between the Scale of Positive and Negative Experience and Positive-Negative Affect Scale, Satisfaction with Life Scale and Life Orientation Test. It can be said by taking the Cronbach alpha coefficient and the test-retest results into account that the test has high reliability. The findings obtained as a result of the research were discussed through comparison with the results of the scale adaptation conducted in different cultures.

Keywords: Subjective well-being, positive affect, negative affect, scale adaptation

Introduction

Researchers who study subjective well-being essentially focused on people's cognitive and emotional reaction toward life conditions (Biswas-Diener, Diener & Tamir, 2004). Subjective well-being includes positive, negative emotions and life satisfaction (Diener, Scollon & Lucas, 2009). Positive and negative affects reflect the basic experiences related to the

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incidents that occur in a person's life (Diener, Scollon & Lucas, 2004). While negative affect dimension covers the personal experiences in negative emotional states such as fear, anger, sorrow, guilt, abasement and hatred, positive affects dimension reflects the personal experiences in positive states like cheer, curiosity, trust and vigilance (Watson, 2002).

Positive affect reflects the feelings of a person such as eagerness, activity and liveliness. High positive affects is the high energy, concentration and satisfactory curiosity state. However, low positive affect is characterized with being sad and lethargy. On the contrary, negative affect is the general dimension of the disorder which is subjective and related to not being satisfactory including various negative emotional states such as anger, disgust, underestimation, guilt, fear and nervousity. Low negative affects is the state of calm and tranquility (Watson, Clark & Tellegen, 1988). Temporary negative emotional experiences may be normal and functional, but long-term negative affects aren't so functional (Diener, Scollon & Lucas, 2004).

Negative affects cause the emergence of many important personal and social problems related to physical disorders such as phobia, anxiety disorders, aggression, violence, depression, suicide, eating disorders, sexual disorders and stress. Although positive affects lead to some problems (mania, drug dependency), they have a low priority among psychologists and emotion researchers. Negative affects have drawn the attention of many researchers (Fredrickson, 2004). Seligman (2002) stated that more importance was given to negative affects compared to positive affects, because negative affects and experiences are more urgent than positive affects.

Positive affects were found in negative relation with depression, anxiety and stress, negative affects were found in positive relation with depression, anxiety and stress (Crawford & Henry, 2004). It was discovered that negative affects were related to neurotism and positive affects to the extraversion personality trait (Larsen & Ketelaar, 1989; Watson & Clark, 1994; Watson, 2002). Positive affects support the sources which enable dealing with the conditions caused by the negative affects in the person (Fredrickson, Mancuso, Branigan & Tugade, 2000). Positive affects according to Fredrickson (2004): (i) develop a person's attention and thinking; (ii) prevent the continuity of the negative emotional arousal; (iii) increase psychological flexibility; (iv) build personal sources; (v) enable the person to feel himself/herself better in the future; (vi) provide the person with well-being. Fredrickson and Losada (2005) stated that the benefits of the positive affects were proved experimentally. Firstly, positive affects change the person's mind. Secondly, positive affects change the body system of the person. Thirdly, positive affects help with the prediction of the

emotional and physical health results. Fourthly, positive affects help with the prediction of how long people will live. Richman and his colleagues (2005) stated that positive affects might play a protective role in the progress of the illness.

PANAS is one of the measurement instruments most commonly used for measuring the positive and negative affects. Diener and colleagues (2010) stated that they were motivated to develop an alternative scale due to some limitations of the PANAS to evaluate dissatisfactory affects against satisfactory affects. PANAS was prepared to measure the concepts of emotional well-being and unhealthiness. Therefore, some expressions weren't considered as emotions while being assessed. Besides, the scale is unsuccessful at measuring many important positive and negative affects, which are thought to be specific for well-being. For example, elements including positive feelings such as "strong", "vigilant" and "determined" cannot be considered as emotions. "Strong" is not an emotional feeling. When a person is scared, he/she may feel "active" or "vigilant". "Determined" can be seen as a motivational state but it is not nice or desired for the person under all circumstances. For instance, reactions of people may be determined when they feel "anger" and "grudge". Moreover, some affects like "excited" in PANAS are rare and very special. For this reason, the scale doesn't reflect the feelings, which will increase the well-being, in a certain way. In relation to the Scale of Positive and Negative Experience, adaptations were made in the Portuguese (Silva & Caetano, 2013), Chinese (Li, Bai & Wang, 2013) and Japanese (Sumi, 2013) cultures. The purpose of this study is to conduct the adaptation of the Scale of Positive and Negative Experience, which was developed by Diener and colleagues (2010), into the Turkish culture.

Method

Participants

The study group of the research consists of 401 university student, 280 (69.8%) of which were female and 121 (30.2%) were male, and they were studying in different departments of the Buca Faculty of Education in Dokuz Eylül University during the spring semester of the academic year 2010-2011. 100 (24.9%) participants were the students of the 1st grade, 76 (19%) of the 2nd grade, 59 (14.7%) of the 3rd grade, 61 (15.2%) of the 4th grade and 105 (26.2%) of the 5th grade.

Instruments

Positive and Negative Experience Scale (PNES)

Scale of Positive and Negative Experience is a brief scale developed by Diener and colleagues (2010) to evaluate 6 positive and 6 negative

feelings. The scale contains the general positive and negative emotions and experiences, especially the emotions specific to the culture. The scale also reflects the other states like curiosity, flow, positive responsibility and physical gratitude besides the evaluation of the feelings, which satisfy and don't satisfy the person focused by many measurement instruments. Each item of the Scale of Positive and Negative Experience is scored between 1 and 5, and 1 is expressed as "very rarely or never" and 5 as "very often or always". When the subdimensions of the scale are scored separately, positive and negative scores vary between 6 and 30. Affect balance score that varies between 24 and -24 can be obtained by subtracting the negative experience score from the positive experience score.

Positive-Negative Affect Scale (PANAS)

Positive-Negative Affect Scale is formed by two subscales with 10 items per each. Each question is scored between 1 "very slightly or not at all" and 5 "extremely". PANAS, which was developed by Watson and colleagues (1988), positive affect subscale measures a person's level of feelings of engagement, energy and alertness; and negative affect subscale measures a person's level of feelings of subjective distress such as anger, disgust, guilt and fear. Watson and colleagues (1988) stated the internal consistency coefficient of the scale as .88 for the positive affect and .87 for the negative affect. Turkish validity and reliability study of the scale was conducted by Gençöz (2000). It was found in the study of Gençöz that the Turkish PANAS consisted of 2 dimensions in consistency with its original form, and the internal consistency was reported respectively as .83 and .86 for positive and negative affects and the test-retest consistency as .40 and .54 as per the same order.

Satisfaction with Life Scale (SLS)

Satisfaction with Life Scale, which was developed by Diener, Emmons, Larsen & Griffin (1985), was adapted to Turkish by Köker (1991). The scale is a self-evaluation scale consisting of 5 Likert-type items that vary between "strongly disagree" (1) and "strongly agree" (7). Köker (1991) stated the consistency coefficient of the test-retest method applied with a 3-week interval as $r = .85$ and the item-test correlations between $r = .71$ and $r = .80$. Cronbach alpha internal consistency coefficient of the scale is (α) .76. The score taken from the scale varies between 5 and 35.

Life Orientation Test (LOT)

Used for determining the optimism level of the individuals that participated in the research, this scale was developed by Scheiver & Carver (1985) for the purpose of determining the individuals' viewpoints of life.

Life Orientation Test consists of 12 items. Four items reflect the positive (optimistic) viewpoint of life and four items reflect the negative (pessimistic) viewpoint of life; the other four items have the function of filling. Items are assessed over five-step scales and one score is obtained by summing the numeric values of the marked options. The lowest score to get from the test is 0 and the highest score is 32. High scores taken from the test reflect the positive viewpoint of life (optimism) and the low scores point at the negative viewpoint (pessimistic). Turkish adaptation of the Life Orientation Test was made by Aydın & Tezer (1991). The reported internal coefficient of the scale's Turkish form is .72 and the test-retest reliability coefficient with the duration of four weeks is .77.

Procedure

The English form of the scale was translated into Turkish by three academic language experts who knew English and Turkish very well. The scale translated by language experts into Turkish was converted into one form. The constituted Turkish form was given to two language experts and translated into English again. It was seen after the reverse translation that the Turkish form of the scale was almost similar to its English form. Then, expert translation assessment form was prepared and the English and Turkish forms of the scale were sent to 8 domain experts, who were at least at the PhD level, as a message; the experts were asked whether the scale items were suitable for Turkish. The scale was shaped for the last time in line with the opinions and suggestions of the experts.

In order to test the linguistic equivalence of the scale, firstly the English form and then the Turkish form of the scale were applied to 43 students, who knew English well and studied at the 4th grade in the English Teaching Department of Dokuz Eylül University, with a two-week interval during the 2010-2011 spring semester. When the correlations between the Turkish and English forms of the scale were checked, a highly positive and significant relationship was found between the English and Turkish forms of the positive experience subdimension ($r = .95, p < .001$), and the English and Turkish forms of the negative experience subdimension ($r = .90, p < .001$).

Data Analysis

Pearson moments multiplication correlation coefficient between the English and Turkish forms was considered for the linguistic equivalence study of the scale. The scale's exploratory and confirmatory factor analysis and construct validity were considered. Moreover, the study of convergent validity was conducted. The reliability study was executed with the Cronbach alpha coefficient and test-retest method. Research data were analyzed with the softwares SPSS 16.0 and LISREL 8.7.

Findings

Exploratory Factor Analysis

Whether the data were suitable for the factor analysis was investigated with the Kaiser Meyer Olkin (KMO) test and Barlett's Sphericity test. The fact that the Kaiser Meyer Olkin (KMO) test result was obtained as .91 and the result of Barlett's Sphericity test was found statistically significant ($\chi^2 = 2405.30$, $p < .000$) shows that the data were suitable for conducting the factor analysis. Exploratory factor analysis was made by using the varimax method, which is one of the rotation techniques. It was discovered as a result of the exploratory factor analysis that the scale items gathered under two factors, eigen value of which was higher than 1, as in the original form. It was discovered that the positive experience dimension explained 33% and the negative experience dimension explained 27% of the variance. The variance explained by the two factors in relation to the scale is seen as 60%. Factor loads of the scale items in the first factor vary between .69 and .86 and in the second factor between .60 and .77 (Table 1).

Table 1. Results of the Exploratory Factor Analysis

Item	The Factor Loadings	
	Factor 1	Factor 1
Positive	.72	
Good	.75	
Pleasant	.69	
Happy	.86	
Joyful	.75	
Contented	.75	
Negative		.70
Bad		.77
Unpleasant		.69
Sad		.72
Afraid		.60
Angry		.65

Confirmatory Factor Analysis

When fit indexes were reviewed for the confirmatory factor analysis, χ^2/sd ratio was seen as 3.47 ($184.42/53 = 3.47$). Other fit indexes were found as RMSEA= 0.07, SRMR= 0.04, GFI= 0.93, NFI= 0.96, RFI= 0.95, CFI= 0.97 and IFI= 0.97. When goodness of fit results obtained for the confirmatory factor analysis model are reviewed, it is seen that the model is concordant (Figure 1).

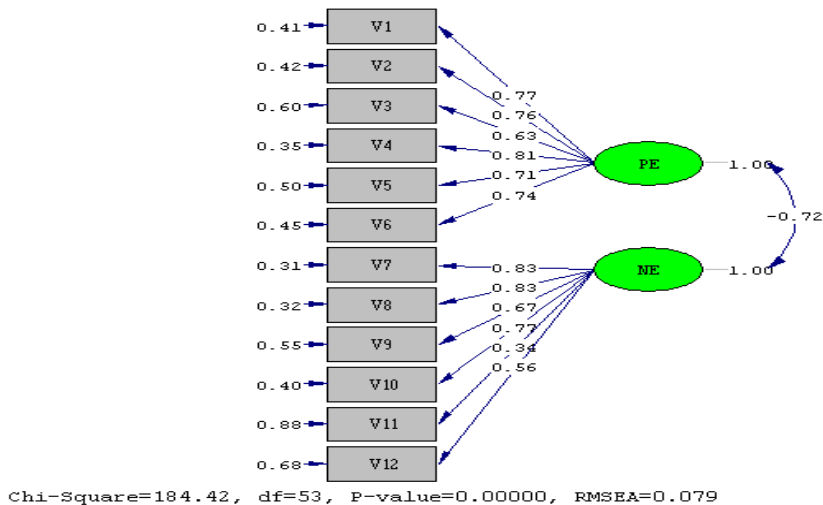


Figure 1. The Path Diagram of the Two-Factor Model

Convergent Validity

Positive and Negative Affect Scale, which was developed by Watson and colleagues (1988) and adapted to Turkish by Gençöz (2000), Satisfaction with Life Scale, which was developed by Diener, Emmons, Larsen & Griffin (1985) and adapted to Turkish by Köker (1991), and Life Orientation Test, which was developed by Scheiver and Carver (1985) and adapted to Turkish by Aydın & Tezer (1991), were used for the convergent validity of the Scale of Positive and Negative Experience. As a result of the scale's convergent scale validity study, significant relationships were observed between positive experience and positive affect ($r=.48$) and negative affect ($r=-.41$), and between negative experience and positive affect ($r=-.21$) and negative affect ($r=.65$). Besides, a positive relationship was found with positive experience, life satisfaction ($r=.43$) and optimism ($r=.45$); and a negative relationship was found with negative experience, life satisfaction ($r=-.34$) and optimism ($r=-.46$) (Table 2).

Table 2. Relationships between Positive and Negative Experiences, and Positive-Negative Affect, Optimism and Satisfaction with Life

Variable	(1)	(2)	(3)	(4)	(5)	(6)
(1) Positive Experience	1					
(2) Negative Experience	-.62**	1				
(3) Positive Affect	.48**	-.21**	1			
(4) Negative Affect	-.41**	.65**	-.15**	1		
(5) Optimism	.45**	-.46**	.35**	-.37**	1	
(6) Satisfaction with Life	.43**	-.34**	.26**	-.42**	.42**	1

** $p<.01$

The Reliability Study of the Positive and Negative Experience Scale

Reliability study of the Scale of Positive and Negative Experience was calculated with the Cronbach alpha coefficient and test-retest method. The Cronbach alpha coefficient obtained in the reliability study of the scale was calculated as .88 for the positive experience dimension and .83 for the negative experience dimension. Reliability study of the scale, which was conducted with the test-retest method, was obtained through the application of the scale on 107 participants with a two-week interval. According to the test-retest result, a positive and significant relationship was observed between the first and second applications of the positive experience dimension at $r = .86$ ($p < .01$) level and between the first and second applications of the negative experience dimension at $r = .85$ ($p < .01$) level.

Conclusion

The purpose of this study is to examine the psychometric properties of the Scale of Positive and Negative Experience (Diener et al., 2010) in the Turkish culture. A high correlation was found between the Turkish and English forms of the scale's positive negative experience dimensions as a result of the language equivalence study. It was seen with the exploratory factor analysis that the scale consisted of two factors as in its original form and the factor loads of the scale items were at a high level. Fit indexes, which were obtained as a result of the confirmatory factor analysis, are at acceptable levels. These findings support the results obtained in the original scale (Diener et al., 2010) and adaptations into Portuguese (Silva & Caetano, 2013), Chinese (Li, Bai & Wang, 2013) and Japanese (Sumi, 2013).

The relationship between the Scale of Positive and Negative Experience and the other well-being scales frequently used in the literature was checked to conduct the convergent validity of the scale. Significant relationships were observed between positive experience and positive affect in the positive direction, between positive experience and negative affect in the negative direction, between negative experience and positive affect in the negative direction, and between negative experience and negative affect in the positive direction. Moreover, it was discovered that positive experience had a significant relationship with life satisfaction and optimism in the positive direction, and negative experience was significantly related to life satisfaction and optimism in the negative direction. Previous researches show that positive experience is related to positive affects positively, to negative affects negatively; negative experience is related to positive affects negatively and to negative affects positively (Diener et al., 2010; Silva & Caetano, 2013; Sumi, 2013). Besides, positive experience was found in positive relation with life satisfaction, and negative experience was found in negative relation with life satisfaction (Diener et al., 2010; Silva & Caetano,

2013; Li, Bai & Wang, 2013; Sumi, 2013). Affect balance is related to happiness positively (Diener et al., 2010; Doğan, Totan, & Sapmaz, 2013).

The Cronbach alpha coefficient obtained in the reliability study of the scale was calculated as .88 for positive experience and .83 for negative experience. This finding has a consistency with the results obtained in the studies, which were conducted in the Diener and colleagues's (2010) USA ($P = .87$; $N = .81$), Silva & Caetano's (2013) Portuguese ($P = .89$; $N = .84$), Li, Bai & Wang's (2013) Chinese ($P = .92$; $N = .91$) and Sumi's (2013) Japanese ($P = .91$; $N = .90$) samples. Significant positive-directional relationships were observed between the first and second applications of the positive and negative experience dimensions as per the test-retest result. The results demonstrate that the PNES has high internal consistency and test-retest reliability.

In summary, the results indicated that that the Scale of Positive and Negative Experience has the necessary psychometric properties in the Turkish culture. Despite these findings, it is an important restriction to conduct the validity and reliability study of the scale only with the students from the Faculty of Education of Dokuz Eylül University in Izmir, Turkey. Validity and reliability study of the scale can be conducted by taking samples from different universities and departments. The Scale of Positive and Negative Experience can be used as a valid and reliable instrument in researches aiming at measuring the positive and negative affects and well-being in the Turkish culture.

References:

- Aydın, G., & Tezer, E. (1991). The relationship between optimism, health problems and academic success. *Psychology Journal*, 7(26), 2-9.
- Biswas-Diener, R., Diener, E., & Tamir, M. (2004). The psychology of subjective well-being. *Daedalus*, 133, 18-25.
- Crawford, J. R., & Henry, J. D. (2004). The positive and negative affect schedule (PANAS): Construct validity, measurement properties and normative data in a large non-clinical sample. *British Journal of Clinical Psychology*, 43, 245–265.
- Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, 49, 71–75.
- Diener, E., Scollon, C. N., & Lucas, R. E. (2004). The evolving concept of subjective well-being: The multifaceted nature of happiness. In P. T. Costa & I. C. Siegler (Eds.), *Advances in cell aging and gerontology*: Vol. 15 (pp. 187-220). Amsterdam: Elsevier.
- Diener, E., Scollon, C. N., & Lucas, R. E. (2009). The evolving concept of subjective well-being: The multifaceted nature of happiness. *Social Indicators Research Series*, 39, 67-100.

- Diener, E., Wirtz, D., Tov, W., Kim-Prieto, C., Choi, D., Oishi, S., & Biswas-Diener, R. (2010). New well-being measures: Short scales to assess flourishing and positive and negative feelings. *Social Indicators Research*, 97, 143–156.
- Doğan, T., Totan, T., & Sapmaz, F. (2013). The role of self-esteem, psychological well-being, emotional self-efficacy, and affect balance on happiness: A path model. *European Scientific Journal*, 9(20), 31-42.
- Fredrickson, B. L., Mancuso, R. A., Branigan, C., & Tugade, M. M. (2000). The undoing effect of positive emotions. *Motivation and Emotion*, 24, 237-258.
- Fredrickson, B. L. (2004). Gratitude, like other positive emotions, broadens and builds. In Emmons, R. A. & M. E. McCullough (Eds.) *The Psychology of Gratitude*. (pp. 145-166). New York: Oxford University Press.
- Fredrickson B. L., & Losada M. F. (2005). Positive affect and the complex dynamics of human flourishing. *American Psychologist*, 60, 678-686.
- Gençöz, T. (2000). Pozitif ve negatif duygu durum ölçeği: Geçerlik ve güvenirlik çalışması [Positive and negative affect schedule: A study of validity and reliability]. *Türk Psikoloji Dergisi*, 15(46), 19-28.
- Köker, S. (1991). A Comparison of Levels of Satisfaction with Life in Normal and Troubled Adolescents a Postgraduate Dissertation, Ankara: Ankara University, Institute of Social Sciences.
- Larsen, R. J., & Ketelaar, T. (1989). Extraversion, neuroticism, and susceptibility to positive and negative mood induction procedures. *Personality and Individual Differences*, 10, 1221-1228.
- Li, F., Bai, X., & Wang, Y. (2013). The scale of positive and negative experience (SPANE): psychometric properties and normative data in a large Chinese sample. *PLoS ONE*, 8(4), 1-9.
- Richman, L. S., Kubzansky, L., Maselko, J., Kawachi, I., Choo, P., & Bauer, M. (2005). Positive emotion and health: going beyond the negative. *Health Psychology*, 24(4), 422–429.
- Scheier, M. F., & Carver, C. S. (1985). Optimism, coping and health: Assessment and implications of generalized outcome expectancies. *Health Psychology*, 4(3), 219-247.
- Seligman, M. E. P. (2002). Positive psychology, positive prevention, and positive therapy, In C.R. Synder & Shane J. Lopez (Eds), *Handbok of Positive Psychology* (pp. 106-119). NY: Oxford University Press.
- Silva, A., & Caetano, A. (2013). Validation of the flourishing scale and scale of positive and negative experience in Portugal. *Social Indicators Research*, 110, 469–478.
- Sumi, K. (2013). Reliability and validity of Japanese versions of the flourishing scale and the scale of positive and negative experience. *Social Indicators Research*, 1-15. Doi: 10.1007/s11205-013-0432-6

Watson, D. (2002). Positive affectivity: The disposition to experience pleasurable emotional states, In C.R. Synder & Shane J. Lopez (Eds), *Handbok of Positive Psychology* (pp. 106-119). NY: Oxford University Press.

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, 54, 1063–1070.

Watson, D., & Clark, L. A. (1994). Manual for the positive and negative affect schedule-expanded form. University of Iowa.